Morris James LLP

Richard K. Herrmann 302.888.6816 rherrmann@morrisjames.com

January 4, 2008

VIA EFILING AND HAND DELIVERY

The Honorable Joseph J. Farnan, Jr. USDC for the District of Delaware 844 King Street Wilmington, DE 19801

Re: Affymetrix, Inc. v. Illumina, Inc., D. Del., C.A. No. 04-901-JJF

Your Honor:

On October 22, 2007 we advised the Court that reexamination requests had been filed with the United States Patent Office ("PTO") for all 5 patents in suit. On December 20, 2007, the PTO found a substantial new question of patentability with respect to U.S. Patent Nos. 6,643,243 and 6,355,432, and ordered reexaminations of the validity of both patents. On December 21, 2007, the PTO found a substantial new question of patentability with respect to U.S. Patent Nos. 5,545,531 and 5,795,716, and also ordered reexaminations of the validity of both of those patents. (Copies of the Reexamination Orders for all 4 patents are attached.) Due to a processing delay in the PTO, the PTO has not yet made a decision on the reexamination of U.S. Patent No. 6,399,365, but we will advise the Court as soon as a corresponding reexamination order for the '365 patent is available.

The four re-examination orders suggest that the PTO wants to be updated on all information in this litigation which is material to the reexaminations. Accordingly, Illumina would like to send certain documents and testimony to the PTO; however, certain of this information has been designated as confidential by Affymetrix. Illumina plans to meet and confer with Affymetrix about de-designating said information for the limited purpose of providing the information to the PTO. In the event that the meet and confer is unsuccessful, Illumina plans to raise the issue with Your Honor at the next opportunity.

Respectfully,

/s/ Richard K. Herrmann

Richard K. Herrmann, I.D. No. 405 rherrmann@morrisjames.com

cc: Maryellen Noreika, Esq. (via email & hand delivery) Daniel Reed, Esq. (via email)

'243 patent

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,889	11/27/2007	6646243	088947-0104	7602
33522	7590 12/20/2007		EXAM	INER
COOLEY	GODWARD LLP			
777 6TH ST SUITE 1100			ART UNIT	PAPER NUMBER
WASHING	ΓON, DC 20001			
			DATE MAILED: 12/20/200	7

Please find below and/or attached an Office communication concerning this application or proceeding.

*	Control No.	Patent Under Reexamination	on
Out of Constitute / Demains Beauted For	90/008,889	6646243	
Order Granting / Denying Request For Ex Parte Reexamination	Examiner	Art Unit	
Ex l'alto Modalimiation	Bennett Celsa	3991	
The MAILING DATE of this communication app	ears on the cover she	et with the correspondence address	5
The request for <i>ex parte</i> reexamination filed <u>27</u> has been made. An identification of the claims, determination are attached.			
Attachments: a) PTO-892, b) PT	TO/SB/08, c)⊡	Other:	
1. The request for ex parte reexamination is	s GRANTED.	•	
RESPONSE TIMES ARE SET AS	FOLLOWS:		
For Patent Owner's Statement (Optional): TW (37 CFR 1.530 (b)). EXTENSIONS OF TIME			on
For Requester's Reply (optional): TWO MON Patent Owner's Statement (37 CFR 1.535). No If Patent Owner does not file a timely statement is permitted.	IO EXTENSION OF T	HIS TIME PERIOD IS PERMITTE	D.
2. The request for ex parte reexamination is	S DENIED.		
This decision is not appealable (35 U.S.C. 30 Commissioner under 37 CFR 1.181 within ON CFR 1.515(c)). EXTENSION OF TIME TO FIL AVAILABLE ONLY BY PETITION TO SUSPI 37 CFR 1.183.	IE MONTH from the r LE SUCH A PETITIO	nailing date of this communication N UNDER 37 CFR 1.181 ARE	(37
In due course, a refund under 37 CFR 1.26 (c) will be made to re	quester:	·.
a) Dy Treasury check or,	·	·	
b) Deposit Account No	, or		
c) D by credit to a credit card account, u	unless otherwise notifi	ed (35 U.S.C. 303(c)).	
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		MU	
		Bennett Celsa Primary Examiner Art Unit: 3991	

cc:Requester (if third party requester)
U.S. Patent and Trademark Office
PTOL-471 (Rev. 08-06)



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Marcus A. Burch

Foley and Lardner LLP

777 E. Wisconsin Avenue

Milwaukee, WI 53202

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/008,889.

PATENT NO. 6646243.

ART UNIT 3991.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

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DETAILED ACTION: Reexamination: Granting of Request

Procedural Posture:

The Third Party Request for ex parte reexamination of claims 14-50 and 52-53 of United States Patent Number 6,646,243 (Pirrung et al.) is noted. The present proceeding (90/008,889) has been granted a filing date of November 27, 2007.

Decision Granting the Request

A substantial new question of patentability affecting claims 14-50 and 52-53 of U.S. Pat. No. 6,646,243 is raised by the request for reexamination.

Since the requester did not request reexamination of claims 1-13 and 51 and did not assert the existence of a substantial new question of patentability (SNQ) for such claims (see 35 U.S.C. § 311(b)(2); see also 37 CFR 1.915b and 1.923), such claims will not be reexamined. This matter was squarely addressed in Sony Computer Entertainment America Inc., et al. v. Jon W. Dudas, Civil Action No. 1:05CV1447 (E.D.Va. May 22, 2006), Slip Copy, 2006 WL 1472462. The District Court upheld the Office's discretion to not reexamine claims in a reexamination proceeding other than those claims for which reexamination had specifically been requested. The Court stated:

"To be sure, a party may seek, and the PTO may grant, ...review of each and every claim of a patent. Moreover, while the PTO in its discretion may review claims for which ... review was not requested, nothing in the statute compels it to do so. To ensure that the PTO considers a claim for ... review, § 311(b)(2) requires that the party seeking reexamination demonstrate why the PTO should reexamine each and every claim for which it seeks review. Here, it is undisputed that Sony did not seek review of every claim under the '213 and '333 patents. Accordingly, Sony cannot now claim that the PTO wrongly failed to reexamine claims for which Sony never requested review, and its argument that AIPA compels a contrary result is unpersuasive."

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Information Disclosure Statement (IDS)

The information disclosure statement and accompanying PTO/SB/08 form submitted on November 27, 2007 is acknowledged. Enclosed please find an examiner-initialed copy of the filed PTO/SB/08 form.

Ongoing Duty To Disclose:

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 6,646,243 throughout the course of this reexamination proceeding. The third party requester is also reminded of their responsibility to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Substantial New Question of Patentability Raised By The Request

For "a substantial new question of patentability" to be present, it is only necessary that:

- A. The prior art patents and/or printed publications raise a substantial question of patentability regarding at least one claim i.e. the prior art teaching is such that there is a substantial likelihood that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable; and it is not necessary that the prior art establish a prima facie case of unpatentability and;
- B. The same question of patentability as to the claim has not been decided by the Office in a previous examination or pending reexamination of the patent or in a final holding of invalidity by the Federal Courts in a decision on the merits involving the claim. See MPEP 2242.

For a reexamination that was ordered on or after November 2, 2002 (the date of enactment of Public Law 107-273; see Section 13105, of the Patent and Trademark

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Office Authorization Act of 2002), reliance solely on old art (as the basis for a rejection) does not necessarily preclude the existence of a substantial new question of patentability (SNQ) that is based exclusively on that old art. Determinations on whether a SNQ exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis. For example, an SNQ may be based solely on old art where the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier concluded examination(s), in view of a material new argument or interpretation presented in the request. MPEP 2258.01.

The 6,646,243 Patented Invention:

Instant independent claims 14, 27, 35, 52 and 53 are illustrative of the invention:

- 14. An apparatus for analyzing nucleic acid binding, comprising: a substrate that comprises at least 1000 different spheres, beads, or particles having different species of nucleic acids attached thereto, the area of the substrate containing the at least 1000 spheres, beads, or particles being less than 1 cm2, at least some of the nucleic acids being bound to fluorescently labeled target nucleic acids; a laser energy source to illuminate the fluorescent labels; a detector to detect a fluorescent label bound to said target nucleic acids; and a data collection system for storing fluoresced light intensity.
- 27. An apparatus for detecting binding of nucleic acids; comprising: (a) a substrate that comprises at least 1000 different spheres, beads, or particles having different species of nucleic acids attached thereto, the area of the substrate containing the at least 1000 spheres, beads, or particles being less than 1 cm2, at least some of the nucleic acids being bound to fluorescently labeled target nucleic acids (b) a laser excitation light source; (c) a detector capable of receiving a signal from the fluorescent labels, the detector comprising a microscope; (d) a translator to move the substrate relative to the detector; and (e) a data collection system adapted to receive input from the detector.
- 35. A method for screening large numbers of biological polymers, comprising: providing target nucleic acids; providing a substrate having an array of at least 1000 different beads, the different beads occupying an area on a substrate of less than 1 cm2, at least some of the different beads having different nucleic acids covalently attached thereto; contacting the target nucleic acids and the beads so that after contact at least some of the nucleic acids on the beads

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hybridize to the target nucleic acids further comprising having fluorescently labeled nucleic acids bound thereto; illuminating the array with a laser energy source to excite the fluorescent labels; and detecting fluoresced light with a detector that is connected to a data storage system; and determining which nucleic acids on the beads have bound to target nucleic acids.

- 52. An apparatus for detecting binding of nucleic acids; comprising: (a) a substrate that comprises and at least 1000 different spheres, beads, or particles having different species of nucleic acids attached thereto, the area of the substrate containing the at least 1000 spheres, beads, or particles being less than 1 cm.sup.2, at least some of the nucleic acids being fluorescently labeled; (b) an excitation light source; (c) a CCD detector capable of receiving a signal from the fluorescent labels, (d) a data collection system adapted to receive input from the detector.
- 53. A method for screening large numbers of biological polymers, comprising: providing target nucleic acids; providing a substrate having an array of at least 1000 different beads, the different beads occupying an area on a substrate of less than 1 cm.sup.2, at least some of the different beads having different nucleic acids covalently attached thereto; contacting the target nucleic acids and the beads so that after contact at least some of the nucleic acids on the beads hybridize to the target nucleic acids further comprising having fluorescently labeled nucleic acids bound thereto; illuminating the array with an energy source to excite the fluorescent labels; and detecting fluoresced light with a CCD detector that is connected to a data storage system; and determining which nucleic acids on the beads have bound to target nucleic acids.

Priority:

The instant 6,646,243 (10/098,203: filed March 15, 2002) patent is a:

CON of 09/690,191 10/16/2000 PAT 6,403,957

which is a CON of 09/129,470 08/04/1998 PAT 6,329,143

which is a CON of 08/456,598 06/01/1995 PAT 6,225,625

which is a DIV of 07/954,646 09/30/1992 PAT 5,445,934

which is a DIV of 07/850,356 03/12/1992 PAT 5,405,783

which is a DIV of 07/492,462 03/07/1990 PAT 5,143.854

which is a CIP of 07/362,901 06/07/1989 ABN.

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Entitlement of the Instant Claims to 35 U.S.C. 120 Priority

The 3rd Party asserts that instant claims should be denied 35 USC 120 priority to the 07/362,901 application since it fails to provide support for the above-recited independent claims.

Upon review of the 07/362,901 application, neither the original specification nor original claims provide support for the instant claims.

The 3rd Party further asserts that the instant claims should only be entitled priority to the10/098,203 application filing date (March 15, 2002) since the common disclosure of the priority applications fail to enable the instant claims (request pages 100-101) nor provide support as indicated by:

a. Exhibit M: Dr. Pirrung under oathe testifying as to inoperability and accompanying Exhibit N (Peter J. Coassin memo); and

b. prosecution history of related application 10/125,530 that claims priority to the 07/492,462 (U.S. PAT 5,143,854 within the instant chain or priority) in which a new matter rejection directed to claims analogous to the instant claims was made as well double patenting over the instant claims. See Request, pages 2-3 and pages 102-117.

The requester's proposed effective filing date of March 15, 2002 is not adopted.

It is noted that, although a reexamination proceeding provides a complete reexamination of the patent claims on the basis of prior art patents and printed publications, issues relating to 35 U.S.C. 112 are addressed only with respect to new claims or amendatory subject matter in the specification, claims or drawings during the reexamination proceeding. See 37 CFR 1.552; MPEP 2258 (Scope of Ex Parte Reexamination). In the reexamination context, effective filing date priority of patented claims to continuation or divisional applications that do not contain new matter is presumed valid.

Additionally, in this regard, it is noted that during the instant patent's 10/098,203 application prosecution the examiner made a new matter rejection encompassing claims 119 and 140 (corresponding to instant claims 14 and 35) that was subsequently withdrawn upon indication of specification support for these claims. See 10/098,203 first

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action dated 12/23/02 at page 3 (new matter rejection); Amendment dated 11/13/02 (providing claim support); and final office action dated March 10, 2003 allowing claims 111-156.

Accordingly, for purposes of prior art, the instant reexamination claims are afforded a priority date of March 7, 1990.

Documents Cited By The Requester As Raising an SNQ:

- 1. DRMANAC et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project", Scientia Yugoslavia, Vol. 16, Nos. 1-2, (Jan. 23,1990) (pp. 97-107).
- 2. Book of abstracts by Dr. R. Crvenjakov and Dr. R. Drmanac and others that was published as part of "The DOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM (56 pp.)
- 3. Poster to supplement the Drmanac Abstract presented by Dr. Crvenjakov and Dr. Drmanac at "TheDOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM pages 1-17.
- 4. DRMANAC et al. EP 0392546 A2 (published: 10/17/90).
- 5. TRIPATZIS CA 1248873 A (published 1/17/89).
- 6. HOVORKA U.S. Pat. No. 4,791,069 (pub: 12/13/88)
- 7. SVANBERG U.S. Pat. No. 4,786,813 (pub: 11/22/88)
- 8. YAMASHITA U.S. Pat. No. 4,778,593 (pub: 10/18/88)
- 9. VAN DEN ENGH U.S. Pat. No. 4,770,992 (pub: 9/13/88).

The above documents 1-3 and 5-9 were not of record in the 10/098,203 application that issued as the instant patent undergoing reexamination.

The requester cites documents 5-9 above in order to address dependent claim limitations not expressly taught in documents 1-4.

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Discussion of the Cited Documents and the Raising of an SNQ:

1. DRMANAC et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project", Scientia Yugoslavia, Vol. 16, Nos. 1-2, 1990 (pp. 97-107).

The Drmanac article teaches the use of discrete particle arrays for performing genomic DNA hybridization and sequence assays using CCD camera analysis. See Dramanac at pages 104-107 and Request appendix A claim charts.

It is agreed that consideration of the Drmanac article raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

2. Book of abstracts by Dr. R. Crvenjakov and Dr. R. Drmanac and others that was published as part of "The DOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM Abstract page 37.

The Drmanac abstract teaches the use in arrays of premarked discrete partices for easy identification in conducting nucleotide hybridization assays. See Abstract and Request appendix A claim charts.

It is agreed that consideration of the Drmanac abstract raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

3. Poster to supplement the Drmanac Abstract presented by Dr. Crvenjakov and Dr. Drmanac at "TheDOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM pages 1-17.

The Drmanac poster details a microsequencing method based on nucleotide sequencing by hybridization using microbead arrays. See poster and Request appendix

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A claim charts.

It is agreed that consideration of the Drmanac poster raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

4. DRMANAC et al. EP 0392546 A2 (published: 10/17/90).

The Dramanac EP 0392546 A2 document, of record in the 10/098,203 application, is not prior art and thus cannot raise a substantial new question of patentability in this proceeding.

5. TRIPATZIS CA 1248873 A (published 1/17/89).

Tripatzis teaches the use of a fluorescent microscope to enhance an image of a chip containing microscopic beads in order to analyze fluorescence related to hybridization reactions occurring on biological polymers located on the microscopic beads. See request page 86

It is agreed that consideration of the Tripatzis document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

6. HOVORKA U.S. Pat. No. 4,791,069 (pub: 12/13/88)

Hovorka teaches the use of the argon laser for emitting light wavelengths less than 488 nm to excite fluorescent labels so that the labels will fluoresce. See request at page 86.

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It is agreed that consideration of the Havorka document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

7. SVANBERG U.S. Pat. No. 4,786,813 (pub: 11/22/88)

Svanberg teaches the availability of a large number of lasers that emit light at 488 nm wavelengths. See Request page 86.

It is agreed that consideration of the Svanberg document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

8. YAMASHITA U.S. Pat. No. 4,778,593 (pub: 10/18/88)

Yamashita teaches the use of the argon laser for emitting light wavelengths less than 488 nm to excite fluorescent labels so that the labels will fluoresce. See request at page 86.

It is agreed that consideration of the Yamashita document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

9. VAN DEN ENGH U.S. Pat. No. 4,770,992 (pub: 9/13/88).

Van Den Engh teaches the use of lasers to excite fluorescent labels. See Request page 86.

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It is agreed that consideration of the Van Den Engh document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

Extensions of Time

Extensions of time under 37 CFR 1.136 (a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to an applicant and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that ex parte reexamination proceedings "will be concluded with special dispatch" (37 CFR 1.555(a)). Extensions of time in ex parte reexamination proceedings are provided for in 37 CFR 1.550(c).

Patent Owner Amendment

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an ex parte reexamination or an inter partes reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), <u>automatically changed to that of the patent file</u> as of the effective date.

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This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice (571) 272-7703 Central Reexam Unit (CRU) (571) 272-7705 Reexamination Facsimile Transmission No. (571) 273-9900

Future Correspondences

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Celsa whose telephone number is 571-272-0807. The examiner can normally be reached on M-F from 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached at 571-272-1535.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Correspondence relating to this ex parte reexamination proceeding are directed to:

By Mail to:

Mail Stop ex parte Reexam Central Reexamination Unit

Office of Patent Legal Administration

Case 1:04-cv-00901-JJF Document 465 Filed 01/04/2008 Page 17 of 61

Application/Control Number:

90/008,889 Art Unit: 3991 Page 13

United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

By FAX to:

(571) 273-9900

Central Reexamination Unit

By hand:

Customer Service Window

Randolph Building 401 Dulany St.

Alexandria, VA 22314

Bennett Celsa Primary Examiner Art Unit 3991

Conferees:

DEBORAH D. JONES CRU SPE-AU 3991

PADMASHRI PONNALURI PRIMARY EXAMINER CRU - AU 3991

'432 patent

UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents United States Patents and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS Marcus A. Burch FOLEY & LARDNER, LLP 777 E. Wisconsin Ave. Milwaukee, WI 53202

Date:

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO.: 90008885

PATENT NO.: 6355432

ART UNIT: 3991

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).



Case 1:04-cv-00901-JJF Document 465 Filed 01/04/2008 Page 20 of 61 UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.usplo.gov

APPLICATION NO.	FII	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
90/008,885	1	1/27/2007	6355432	088947-0103	7322
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DATE MAILED: 12/20/2007

Please find below and/or attached an Office communication concerning this application or proceeding.

	Control No.	Patent Under Reexamination
Order Creating / Denving Beautet For	90/008,885	6355432
Order Granting / Denying Request For Ex Parte Reexamination	Examiner	Art Unit
	Bennett Celsa	3991
The MAILING DATE of this communication appe	ears on the cover sheet with the	e correspondence address
The request for <i>ex parte</i> reexamination filed <u>27</u> has been made. An identification of the claims, determination are attached.	November 2007 has been couthe references relied upon, ar	nsidered and a determination and the rationale supporting the
Attachments: a) PTO-892, b) PT	O/SB/08, c) Other:	·
1. The request for ex parte reexamination is	GRANTED.	
RESPONSE TIMES ARE SET AS F	OLLOWS:	
For Patent Owner's Statement (Optional): TW (37 CFR 1.530 (b)). EXTENSIONS OF TIME A	O MONTHS from the mailing ARE GOVERNED BY 37 CFR	date of this communication 1.550(c).
For Requester's Reply (optional): TWO MONT Patent Owner's Statement (37 CFR 1.535). Not If Patent Owner does not file a timely statement is permitted.	O EXTENSION OF THIS TIME	E PERIOD IS PERMITTED.
2. The request for <i>ex parte</i> reexamination is	DENIED.	
This decision is not appealable (35 U.S.C. 303 Commissioner under 37 CFR 1.181 within ONE CFR 1.515(c)). EXTENSION OF TIME TO FIL AVAILABLE ONLY BY PETITION TO SUSPE 37 CFR 1.183.	E MONTH from the mailing da .E SUCH A PETITION UNDEF	te of this communication (37 R 37 CFR 1.181 ARE
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cc:Requester (if third party requester)
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PTOL-471 (Rev. 08-06)



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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

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Milwaukee, WI 53202

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REEXAMINATION CONTROL NO. 90/008,885.

PATENT NO. 6355432.

ART UNIT 3991.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Application/Control Number: 90/008,885

Page 2

Art Unit: 3991

DETAILED ACTION: Reexamination: Granting of Request Procedural Posture:

The Third Party Corrected Request for *ex parte* reexamination of claims 1-13 and 17-22 of United States Patent Number 6,355,432 (Fodor et al.) is noted. The present proceeding (90/008,885) has been granted a filing date of November 27, 2007.

Decision Granting the Request

A substantial new question of patentability affecting claims 1-13 and 17-22 of U.S. Pat. No. 6,355,432 is raised by the request for reexamination.

Since the requester did not request reexamination of claims 14-16 (see Corrected Request at p. 4) and did not assert the existence of a substantial new question of patentability (SNQ) for such claims (see 35 U.S.C. § 311(b)(2); see also 37 CFR 1.915b and 1.923), such claims will not be reexamined. This matter was squarely addressed in Sony Computer Entertainment America Inc., et al. v. Jon W. Dudas, Civil Action No. 1:05CV1447 (E.D.Va. May 22, 2006), Slip Copy, 2006 WL 1472462. The District Court upheld the Office's discretion to not reexamine claims in a reexamination proceeding other than those claims for which reexamination had specifically been requested. The Court stated:

"To be sure, a party may seek, and the PTO may grant, ...review of each and every claim of a patent. Moreover, while the PTO in its discretion may review claims for which ... review was not requested, nothing in the statute compels it to do so. To ensure that the PTO considers a claim for ... review, § 311(b)(2) requires that the party seeking reexamination demonstrate why the PTO should reexamine each and every claim for which it seeks review. Here, it is undisputed that Sony did not seek review of every claim under the '213 and '333 patents. Accordingly, Sony cannot now claim that the PTO wrongly failed to reexamine claims for which Sony never requested review, and its argument that AIPA compels a contrary result is unpersuasive."

Information Disclosure Statement (IDS)

The information disclosure statement and accompanying PTO/SB/08 form submitted on November 27, 2007 is acknowledged. Enclosed please find an examiner-initialed copy of the filed PTO/SB/08 form.

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Ongoing Duty To Disclose:

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 6,355,432 throughout the course of this reexamination proceeding. The third party requester is also reminded of their responsibility to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Substantial New Question of Patentability Raised By The Request

For "a substantial new question of patentability" to be present, it is only necessary that:

- A. The prior art patents and/or printed publications raise a substantial question of patentability regarding at least one claim i.e. the prior art teaching is such that there is a substantial likelihood that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable; and it is not necessary that the prior art establish a prima facie case of unpatentability and;
- B. The same question of patentability as to the claim has not been decided by the Office in a previous examination or pending reexamination of the patent or in a final holding of invalidity by the Federal Courts in a decision on the merits involving the claim. See MPEP 2242.

For a reexamination that was ordered on or after November 2, 2002 (the date of enactment of Public Law 107-273; see Section 13105, of the Patent and Trademark Office Authorization Act of 2002), reliance solely on old art (as the basis for a rejection) does not necessarily preclude the existence of a substantial new question of patentability (SNQ) that is based exclusively on that old art. Determinations on whether a SNQ exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis. For example, an SNQ may be based solely on old art where the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier concluded examination(s), in view of a material new argument or interpretation presented in the request. MPEP 2258.01.

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The 6,355,432 Patented Invention:

The instant invention is directed to a composition comprising an array of coded beads identifying different bound target-specific polymer sequences.

Instant independent claim 1 and dependent claim 2 are illustrative of the invention:

- 1. A collection of beads comprising a plurality of beads which have binding polymers of different target specific sequence attached thereto; said beads being coded with an encoding system whereby the target specific sequence of the polymer attached to the beads can be identified.
- 2. The collection of claim 1, wherein the binding polymer is an oligonucleotide having a given length and is selected from the group consisting of all possible oligonucletide sequences having the same number of nucleotides.

Priority:

The instant 6,355,432 (09/585,659: filed June 2, 2000) patent is a:

which is a CON of 09/362,089 07/28/1999 PAT 6,440,667

which is a DIV of 091056,927 04/08/1998 PAT 6,197,506

which is a CON of 08/670,118 06/25/1996 PAT 5.800,992

which is a DIV of 08/168,904 12/15/1993 ABN

which is a CON of 07/624,114 12/06/1990 ABN

which is a CIP of 07/492,462 03/07/1990 PAT 5,143,854

and is a CIP of 07/362,901 06/07/1989 ABN

Entitlement of the Instant Clalms to 35 U.S.C. 120 Priority

The 3rd Party asserts that instant claims should be denied 35 USC 120 priority to the 07/492, 462 (filed 3/7/90) and 07/362,901 (filed 6/7/89) applications since these applications fail to provide support for the above-recited independent claims. Accordingly, the 3rd Party asserts that the instant claims are entitled to the priority date of the 07/624,114 application (12/06/90 filing date).

Upon review of the 07/492,462 and 07/362,901 applications, it is agreed that neither the original specification nor original claims of these applications provide support for the instant claims.

Accordingly, for purposes of prior art, the instant reexamination claims are afforded a priority date of <u>December 6</u>, 1990.

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Documents Cited By The Requester As Raising an SNQ:

- 1. Book of abstracts by Dr. R. Crvenjakov and Dr. R. Drmanac and others that was published as part of "The DOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM (56 pp.: see p. 37)
- 2. Poster to supplement the Drmanac Abstract presented by Dr. Crvenjakov and Dr. Drmanac at "TheDOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM pages 1-17.
- 3. DRMANAC et al. EP 0392546 A2 (published: 10/17/90).
- 4. TRIPATZIS CA 1248873 A (published 1/17/89).
- 5. HOLMES and LINDMOS WO 89/11101 A1 (published 11/16/89).

The above documents 1-2 and 4-5 were not of record in the 09/585,659 application that issued as the instant patent undergoing reexamination.

Document 3 (DRMANAC EP 0392546 A2) was of record in the 09/585,659 application but was not applied by the Examiner.

Discussion of the Cited Documents and the Raising of an SNQ:

1. Book of abstracts by Dr. R. Crvenjakov and Dr. R. Drmanac and others that was published as part of "The DOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM Abstract page 37.

The Drmanac abstract teaches the use in arrays of premarked discrete partices for easy identification in conducting nucleotide hybridization assays. See Abstract and Corrected Request pp. 16-24 with accompanying claim charts.

Consideration of the Drmanac abstract raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination and since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

90/008.885 Art Unit: 3991 Page 6

2. Poster to supplement the Drmanac Abstract presented by Dr. Cryeniakov and Dr. Drmanac at "TheDOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989 in Sante Fe, NM pages 1-17.

The Drmanac poster details a microsequencing method based on nucleotide sequencing by hybridization using microbead arrays. See poster and Corrected Request pp. 16-24 with accompanying claim charts.

Consideration of the Drmanac poster raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination and since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

3. DRMANAC et al. EP 0392546 A2 (published: 10/17/90).

The Drmanac EP 0392546 document discloses the use of arrays comprising microbead particles which can be discriminated by physical and chemical characteristics for use in screening bound oligonucleic acid sequences. See EP Abstract and claims 1-18.

Although, the Drmanac EP 0392546 A2 document was of record 09/585.659 application this document was not applied by the Examiner. The instant request raises a substantial new question of patentability since the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier concluded. examination(s), in view of a material new argument or interpretation presented in the request.

Consideration of the Drmanac EP document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination and since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

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4. TRIPATZIS CA 1248873 A (published 1/17/89).

Tripatzis teaches the use of a microscope to enhance an image of a chip containing size and/or fluorescent encoded microscopic beads in order to analyze hybridization reactions occurring on biological polymers located on the microscopic beads. See Tripatzis abstract, pp. 3-4 and claims; corrected request pp. 39-41.

Consideration of the Tripatzis document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination and since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

5. HOLMES 89/11101 A1 (published 11/16/89)

Holmes teaches assaying methods for a plurality of analytes attached to bead particles which are distinguishable from each other. See Holmes Abstract; claims and corrected request at pages 42-46.

Consideration of the Holmes document raises a substantial new question of patentability as to the instant claims that has not been decided in a previous examination or reexamination and since there is a substantial likelihood that a reasonable examiner would consider this teaching important in deciding the patentability of the instant claims.

Extensions of Time

Extensions of time under 37 CFR 1.136 (a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to an applicant and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that ex parte reexamination proceedings "will be concluded with special dispatch" (37 CFR 1.555(a)). Extensions of time in ex parte reexamination proceedings are provided for in 37 CFR 1.550(c).

Patent Owner Amendment

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be

Page 8

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formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an ex parte reexamination or an inter partes reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), <u>automatically changed to that of the patent file</u> as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice (571) 272-7703 Central Reexam Unit (CRU) (571) 272-7705 Reexamination Facsimile Transmission No. (571) 273-9900

Future Correspondences

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Celsa whose telephone number is 571-272-

90/008,885 Art Unit: 3991 Page 9

0807. The examiner can normally be reached on M-F from 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached at 571-272-1535.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Correspondence relating to this ex parte reexamination proceeding are directed to:

By Mail to:

Mail Stop ex parte Reexam

Central Reexamination Unit

Office of Patent Legal Administration United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

By FAX to:

(571) 273-9900

Central Reexamination Unit

By hand:

Customer Service Window

Randolph Building 401 Dulany St.

Alexandria, VA 22314

Bennett Celsa Primary Examiner Art Unit 3991

Conferees:

DEBORAH D. JONES CRU SPE-AU 3991

PADMASHRI PONNALUR: PRIMARY EXAMINER CRU - AU 3991

PTO/SB/08 (09-06) Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control

Substitute for form 1449/PTO			Complete if Known			
	INFORMAT STATEME			Reexamination control Number	90/008,885	
Date Submitted: November 27, 2007		Filing Date	TBD			
Sheet	1	of	2	Attorney Docket Number	088947-0103	

U.S. PATENT DOCUMENTS						
Examiner Cite	Cite	Document Number	Publication Date	Name of Patentee or Applicant of	Pages, Columns, Lines, Where Relevant	
Initials*	No.1	Number-Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear	
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UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Application Document Serial Number-Kind Code ² (if known)	Filing Date of Cited Document MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
14	A1.	EP 0 392 546 A2	10-17-1990	Dmanac, et al.		1
MY	A2.	WO 89/11101 A1	11-16-1989	Lindmo, Tore		†
2/8	A3.	CA 1 248 873 A	01-17-1989	Tripatzis, Ioannis		1
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NON PATENT LITERATURE DOCUMENTS

Examiner Signature	Mad	Date Considered	12/19/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional), 2 See Kinds Codes of USPTO Patent Documents at www.usplo.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3), 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete. Including nathering, preparing

process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08 (09-06)

Approved for use through 03/31/2007. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT		RMATION DISCLOSURE EMENT BY APPLICANT	Reexamination control 90/008,885 Number		
D	ate Sul	bmitted: November 27, 2007	Filling Date TBD		
Sheet	2	of 2	Attorney Docket Number	088947-0103	
Examiner Initials*	Cite No.1	item (book, magazine, journal,	serial, symposium, catalog, etc.) d blisher, city and/or country where	article (when appropriate), the or the late, page(s), volume-issue number(s), published.	T ⁶
M	A4.	The book of abstracts by Dr. R. C.	rveniakov and Dr. R. Drmanac an	d others that was published as part of November 3-4, 1989 in Sante Fe, NM	
M	A5.	The poster to supplement the Drr DOE/NIH Human Genome Contra	nanac Abstract presented by <u>Dr. C</u> actor/Grantee Workshop" on Nove	<u>crvenjakov and Dr. Drmanac at "The</u> mber 3-4, 1989 in Sante Fe, NM	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the Individual case. Any comments on the amount of time you require to complete

process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 nours to complete, including gautering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Application Number	90/008,885	6355432
	Examiner	Art Unit
1 (88) (8 (8) (84)) 84)) 843) 843) (84) (8)	Bennett Celsa	3991

U.S. Patent and Trademark Office Part of Paper No.: 20071217

Search Notes

Application/Control No.	Applicant(s)/Patent Under Reexamination
90008885	6355432
Examiner	Art Unit
Celsa, Bennett	3991

Examiner	Date	Subclass	Class
_	Date	Subclass	Class

SEARCH NOTES			
Search Notes	Date	Examiner	
Reviewed 07/492,462, 07/362,901 and 09/585,659)	12/19/07	BC	

	INTERFERENCE SEA	RCH	
Class	Subclass	Date	Examine

U.S. Patent and Trademark Office Part of Paper No.: 20071217

'531 patent



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,888	11/27/2007	5,545,531	088947-0105	6644
42145 75	590 12/21/2007		EXAMINER	
Lisa M. Trean				
•	Brown & Pendleton, P.C.		ARTIBUT	PAPER NUMBER
	•		ART UNIT .	FAFER NUMBER
Reservoir Place				
1601 Trapelo R				

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE



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United States Patent and Trademark Office
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Alexandria, VA 22313-1450
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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Marcus A. Burch Foley and Lardner LLP 321 North Clark Street Suite 2800 Chicago, Illinois 60610

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/008,888.

PATENT NO. 5,545,531.

ART UNIT 3991.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

	Control No.	Patent Under Reexamination		
Order Granting / Denying Request For Ex Parte Reexamination	90/008,888	5,545,531		
	Examiner	Art Unit		
	Padmashri Ponnaluri	3991		
The MAILING DATE of this communication appe	ears on the cover sheet with the	e correspondence address		
The request for <i>ex parte</i> reexamination filed <u>27</u> has been made. An identification of the claims, determination are attached.				
Attachments: a) ☐ PTO-892, b) ☑ PT	TO/SB/08, c) ☐ Other: _	·		
1. The request for ex parte reexamination is	GRANTED.			
RESPONSE TIMES ARE SET AS I	FOLLOWS:			
For Patent Owner's Statement (Optional): TW (37 CFR 1.530 (b)). EXTENSIONS OF TIME				
For Requester's Reply (optional): TWO MON Patent Owner's Statement (37 CFR 1.535). No If Patent Owner does not file a timely statement is permitted.	O EXTENSION OF THIS TIME	PERIOD IS PERMITTED.		
2. The request for ex parte reexamination is	DENIED.	•		
This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.				
In due course, a refund under 37 CFR 1.26 (c) will be made to requester:			
a) Dy Treasury check or,				
b) Deposit Account No	, or			
c) 🗌 by credit to a credit card account, u	nless otherwise notified (35 U.	S.C. 303(c)).		
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	Prima	nashri Ponnaluri ary Examiner nit: 3991		

cc:Requester (if third party requester)
U.S. Patent and Trademark Office
PTOL-471 (Rev. 08-06)

Page 2

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DETAILED ACTION: Reexamination: Granting of Request

Procedural Posture:

The Third Party Request (original 10/19/07, corrected on 11/27/07) for *ex parte* reexamination of claims 1-4 of United States Patent Number 5,545,531 (the `531 patent) to Rava et al is acknowledged, and reexamination control number 90/008,888 is assigned.

Decision Granting the Order

A substantial new question of patentability affecting **claims 1-4** of United States Patent Number 5,545,531 is raised by the request for reexamination.

Status of Claims

Claims 1-4 are present in the `531 patent.

Claims 1-4 are currently subject to reexamination proceedings.

Priority

The current '531 patent is issued from application 08/476,850, filed on June 7, 1995.

Information Disclosure Statement

The Information disclosure statement (PTO/SB/08) (corrected) filed on 11/27/07 has been considered.

Ongoing Duty to Disclose

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 5,545,531 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286. The third party requester is also reminded of the ability to similarly

90/008,888

Art Unit: 3991

Page 3

appraise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Substantial New Question of Patentability (SNQ) Raised By the Request

For "a substantial new question of patentability" to be present, it is only necessary that:

- A. The prior art patents and/or printed publications raise a substantial question of patentability regarding at least one claim i.e. the prior art teaching is such that there is a substantial likelihood that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable; and it is not necessary that the prior art establish a prima facie case of unpatentability and;
- B. The same question of patentability as to the claim has not been decided by the Office in a previous examination or pending reexamination of the patent or in a final holding of invalidity by the Federal Courts in a decision on the merits involving the claim. See MPEP 2242.

For a reexamination that was ordered on or after November 2, 2002 (the date of enactment of Public Law 107-273; see Section 13105, of the Patent and Trademark Office Authorization Act of 2002), reliance *solely* on old art (as the basis for a rejection) does not necessarily preclude the existence of a substantial new question of patentability (SNQ) that is based exclusively on that old art. Determinations on whether a SNQ exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis. For example, a SNQ may be based solely on old art where the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier concluded examination(s), in view of a material new argument or interpretation presented in the request. MPEP 2258.01.

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The Rava `531 Patented Invention

In the `531 patent claims 1-4 are present, of which independent claims 1 and 3 are drawn to a method of making a biological chip plate. Claim 2 depends on claim 1, and claim 4 depends on claim 3.

The independent claims 1 and 3 are appended below.

Claim 1. A method for making a biological chip plate comprising the steps of:

- (a) providing a body comprising a plurality of wells defining spaces;
- b) providing a wafer comprising on its surface a plurality of probe arrays, each probe array comprising a collection of probes, at least two of which are different, arranged in a spatially defined and physically addressable manner;
- (c) attaching the wafer to the body so that the probe arrays are exposed to the spaces of the wells.

Claim 3. A method for making a biological chip plate comprising the steps of providing a wafer comprising on its surface a plurality of probe arrays, each probe array comprising a collection of probes, at least two of which are different, arranged in a spatially defined and physically addressable manner; and applying a material resistant to the flow of a liquid sample so as to surround the probe arrays, thereby creating test wells.

Documents cited by the Requester

WO 93/17126 to Chetverin et al, International Publication Date 02 September 1993.

WO 93/17126 (Chetverin) reference was neither cited nor used in rejections during the prosecution of the application that resulted in the present `531 patent.

Discussion of the Cited Documents and an SNQ

WO 93/17126 (Chetverin)raises a substantial new question of patentability of claims of the present US Patent 5,545,531 (Rava et al) (see the original request filed 10/19/07, pages 6-36 and claim chart).

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Chetverin teaches novel oligonucleotide arrays and their use for sorting, isolating, sequencing, and manipulating nucleic acids. Chetverin teaches "binary array" containing immobilized oligos comprised of two sequence segments of predetermined length, one variable and the other constant. The constant segment is the same in every oligo of the array. The variable segments can vary both in sequence and length (see Chetverin page 2).

Chetverin discloses a "sectioned array" consisting of array of wells to which oligonucleotides are attached (see page 3). Figure 2 shows a sectioned array in which a support sheet (60) having an array of depressions or wells (62), each containing many copies of an immobilized oligo (64) (see page 7). Chetverin discloses surveying oligonucleotides with binary arrays. Chetverin teaches surveying will be accomplished simultaneously for many or all wells of a partialing array by utilizing a sheet on which miniature survey arrays have been "printed" in pattern that coincides with the arrangement of wells in the partialing array (see Chetverin figures 6 and 7). In figure 7, partialing array 31, comprising an array of wells 31a, is surveyed using sheet 43, having printed thereon an array of miniaturized survey arrays 42. In figure 7, the pattern of arrays 42 corresponds to the pattern of wells 31a, whereby all wells 31a can be surveyed simultaneously (see page 20).

There is a substantial likelihood that a reasonable examiner would consider the teachings of WO 93/171126 (Chetverin) important in deciding the patentability of claims 1-10 of the present US Patent 5,545,531.

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Conclusion

In view of the above, the request for reexamination is GRANTED.

Claims 1-4 of United States Patent Number 5,545,531 will be reexamined.

Extensions of Time

Extensions of time under 37 CFR 1.136 (a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to an applicant and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that ex parte reexamination proceedings "will be concluded with special dispatch" (37 CFR 1.555(a)). Extensions of time in ex parte reexamination proceedings are provided for in 37 CFR 1.550(c).

Patent Owner Amendment

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an ex parte reexamination or an inter partes reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination, 72 FR 18892 (April 16, 2007) (Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is,

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by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, <u>including the present reexamination proceeding</u>, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice	(571)	272-7703
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Padmashri Ponnaluri whose telephone number is 571-272-0809. The examiner can normally be reached on Monday through Friday between 7 AM and 3.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-9900.

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

All correspondence relating to this Ex parte Reexamination proceeding should be directed to:

By Mail to:

Attn: Mail Stop "Ex Parte Reexam" Central Reexamination Unit Commissioner for Patents P. O. Box 1450 Alexandria VA 22313-1450

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Customer Service Window Attn: Central Reexamination Unit Randolph Building, Lobby Level 401 Dulany Street Alexandria, VA 22314

Conferee:

DEBORAH D. JONES CRU SPE-AU 3991 Padmashri Ponnaluri Primary Examiner Unit 3991

BENNETT M. CELSA PRIMARY EXAMINER CRU - AU 3991

'716 patent



United States Patent and Trademark Office

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APPLICATION NO.	FII	LING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,886	1	1/27/2007	5795716	-	088947-0106	7278
33522	7590	12/21/2007			EXAMINER	
COOLEY C						
SUITE 1100	CDD1 IVV				ART UNIT	PAPER NUMBER
WASHINGT	ON, DC	20001				

DATE MAILED: 12/21/2007

Please find below and/or attached an Office communication concerning this application or proceeding.



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Marcus A. Burch FOLEY & LARDNER LLP 321 N. Clark Street, Suite 2800 Chicago, IL 60610

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/008,886.

PATENT NO. <u>5795716</u>.

ART UNIT 3991.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

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	Control No.	Patent Under Reexamination		
Order Granting / Denying Request For Ex Parte Reexamination	90/008,886	5795716		
	Examiner	Art Unit		
	Padmashri Ponnaluri	3991		
The MAILING DATE of this communication appears on the cover sheet with the correspondence address				
The request for <i>ex parte</i> reexamination filed <u>27</u> has been made. An identification of the claims, determination are attached.				
Attachments: a) PTO-892, b) PT	O/SB/08, c) Other: _			
1. The request for ex parte reexamination is	GRANTED.			
RESPONSE TIMES ARE SET AS FOLLOWS:				
For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).				
For Requester's Reply (optional): TWO MONT Patent Owner's Statement (37 CFR 1.535). NO If Patent Owner does not file a timely statement is permitted.	DEXTENSION OF THIS TIME	PERIOD IS PERMITTED.		
2. The request for <i>ex parte</i> reexamination is	DENIED.			
This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.				
In due course, a refund under 37 CFR 1.26 (c	e) will be made to requester:			
a) Dy Treasury check or,				
b) Dy credit to Deposit Account No, or				
c) by credit to a credit card account, ur	nless otherwise notified (35 U.S	S.C. 303(c)).		
		1 / _		
	Prima	nashri Ponnaluri nry Examiner nit: 3991		

cc:Requester (if third party requester)
U.S. Patent and Trademark Office
PTOL-471 (Rev. 08-06)

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DETAILED ACTION: Reexamination: Granting of Request

Procedural Posture:

The Third Party Request (original 10/19/07, corrected on 11/27/07) for *ex parte* reexamination of claims 1-10 of United States Patent Number 5,795,716 (the `716 patent) to Chee et al is acknowledged, and reexamination control number 90/008,886 is assigned.

Decision Granting the Order

A substantial new question of patentability affecting **claims 1-10** of United States Patent Number 5,795,716 is raised by the request for reexamination.

Status of Claims

Claims 1-10 are present in the `716 patent.

Claims 1-10 are currently subject to reexamination proceedings.

Priority

The current '716 patent is issued from application 08/327,525, filed on October 21, 1994.

Information Disclosure Statement

The Information disclosure statement (PTO/SB/08) (corrected) filed on 11/27/07 has been considered.

Ongoing Duty to Disclose

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 5,795,716 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286. The third party requester is also reminded of the ability to similarly

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appraise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Substantial New Question of Patentability (SNQ) Raised By the Request

For "a substantial new question of patentability" to be present, it is only necessary that:

- A. The prior art patents and/or printed publications raise a substantial question of patentability regarding at least one claim i.e. the prior art teaching is such that there is a substantial likelihood that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable; and it is not necessary that the prior art establish a prima facie case of unpatentability and;
- B. The same question of patentability as to the claim has not been decided by the Office in a previous examination or pending reexamination of the patent or in a final holding of invalidity by the Federal Courts in a decision on the merits involving the claim. See MPEP 2242.

For a reexamination that was ordered on or after November 2, 2002 (the date of enactment of Public Law 107-273; see Section 13105, of the Patent and Trademark Office Authorization Act of 2002), reliance *solely* on old art (as the basis for a rejection) does not necessarily preclude the existence of a substantial new question of patentability (SNQ) that is based exclusively on that old art. Determinations on whether a SNQ exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis. For example, a SNQ may be based solely on old art where the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier concluded examination(s), in view of a material new argument or interpretation presented in the request. MPEP 2258.01.

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Application/Control Number:

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The Chee `716 Patented Invention

In the '716 patent claims 1-10 are present, of which independent claims 1-4 are drawn to a computer program product, and independent claims 6-8 are drawn a system that identifies an unknown base in a sample. Claims 9 and 10 are dependent on any of the independent claims 5, 6, 7 or 8.

The independent claims 1-8 are appended below.

Claim 1. A computer program product that identifies an unknown base in a sample nucleic acid sequence, comprising:

computer code that receives a plurality of signals corresponding to probe intensities for a plurality of nucleic acid probes, each probe intensity indicating an extent of hybridization of a nucleic acid probe with at least one nucleic acid sequence including said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that performs a comparison of said plurality of probe intensities to each other; computer code that generates a base call identifying said unknown base according to results of said comparison and said sequences of said nucleic acid probes; and a computer readable medium that states said computer codes.

- Claim 2. A computer program product that identifies an unknown base in a sample nucleic acid sequence, comprising:
- computer code that receives a plurality of signals corresponding to probe intensities for a plurality of nucleic acid probes, each probe intensity indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base;
- computer code that calculates a ratio of a higher probe intensity to a lower probe intensity; computer code that generates a base call identifying said unknown base according to a base of a nucleic acid probe having said higher probe intensity if said ratio is greater than a predetermined ratio value; and
- a computer readable medium that stores said computer codes.
- Claim 3. A computer program product that identifies an unknown base in a sample nucleic acid sequence, comprising:
- computer code that receives a first set of signals corresponding to a first set of probe intensities, each probe intensity in said first set indicating an extent of hybridization of a nucleic acid probe with a reference nucleic acid sequence, and each nucleic acid probe differing from each other by at least a single base;
- computer code that receives a second set of signals corresponding to a second set of probe

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<u>intensities</u>, each probe intensity in said second set indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that performs a comparison of at least one of said probe intensities in said first set and at least one of said probe intensifies in said second set;

computer code that generates a base call identifying said unknown base according to results of said comparisons said sequence of said nucleic acid probe; and a computer readable medium that stores said computer codes.

Claim 4. A computer program product that identifies an unknown base in a sample nucleic acid sequence, comprising:

computer code that receives <u>signals corresponding to statistics about a plurality of experiments</u>, each of said experiments producing probe intensities, each probe intensity indicating an extent of hybridization of a nucleic acid probe with a reference nucleic acid sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that receives a plurality of signals corresponding to probe intensifies, each probe intensity indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base; computer code that performs a comparison of at least one of said plurality of probe intensities with said statistics;

computer code that generates a base call identifying said unknown base according to results of said comparison and said sequence of said nucleic acid probe; and a computer readable medium that stores said computer codes.

Claim 5. A system that identifies an unknown base in a sample nucleic acid probe sequence, comprising:

a processor; and

a computer readable medium coupled to said processor for storing a computer program comprising:

computer code that receives a plurality of signals corresponding to probe intensities for a plurality of nucleic acid probes, each probe intensity indicating an extent of hybridization of a nucleic acid probe with at least one nucleic acid sequence including said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that performs a comparison of said plurality of probe intensities to each other; and

computer code that generates a base call identifying said unknown base according to results of said comparison and said sequences of said nucleic acid probes.

Claim 6. A system that identifies an unknown base in a sample nucleic acid sequence, comprising:

a processor, and

a computer readable medium coupled to said processor for storing a computer program comprising:

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computer code that receives a plurality of signals corresponding to probe intensities for a plurality of nucleic acid probes, each probe intensity indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that calculates a ratio of a higher probe intensity to a lower probe intensity; and

computer code that generates a base call identifying said unknown base according to a base of a nucleic acid probe having said higher probe intensity if said ratio is greater than a predetermined ratio value.

Claim 7. A system that identifies an unknown base in a sample nucleic acid sequence, comprising:

a processor; and

a computer readable medium coupled to said processor for storing a computer program comprising:

computer code that receives a first sex of signals corresponding to probe intensities, each probe intensity in said first set indicating an extent of hybridization of a nucleic acid probe with a reference nucleic acid sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that receives a second set of signals corresponding to probe intensities, each probe intensity in said second set indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that performs a comparison of at least one of said probe intensities in said first set and at least one of said probe intensities in said second set; and

computer code that generates a base call identifying said unknown base according to results of said comparison and said sequence of nucleic acid probe.

Claim 8. A system that identifies an unknown base in a sample nucleic acid sequence, comprising:

a processor; and

a computer readable medium coupled to said processor for storing a computes program comprising:

computer code that <u>receives signals corresponding to statistics about a plurality of experiments</u>, each of said experiments producing probe intensifies, each probe intensity indicating an extent of hybridization of a nucleic acid probe with a reference nucleic acid sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that receives a plurality of signals corresponding to probe intensities, each probe intensity indicating an extent of hybridization of a nucleic acid probe with said sample sequence, and each nucleic acid probe differing from each other by at least a single base;

computer code that performs a comparison of at least one of said plurality of probe intensities with said statistics; and

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computer code that generates a base call identifying said unknown base according to results of said unknown base according to results of said comparison and said nucleic acid probe.

Documents cited by the Requester

- 1. WO 92/10588 to Fodor et al. International Publication Date 25 June 1992.
- 2. PH.D. Thesis of J K Elder, 1993 (Elder Thesis).
- 3. Southern et al. Genomics, Vol. 13, pages 1008-1017, 1992.
- 4. US Patent 5,972,619 to Drmanac et al. (Issued on 10/26/99 with effective filing date of 3/30/1988).
- 5. Book of Abstracts by Drmanac, Published as part of "DOE/NIH Human Genome Contractor/Grantee Workshop" on November 3-4, 1989, Santa Fe, NM (Drmanac Abstract Book).

WO 92/10588 to Fodor et al was used in a rejection in the application 08/327,525 that resulted into the current `716 patent. In this reexamination proceedings, WO 92/10588 to Fodor et al is viewed in a new light based on different disclosure in Fodor et al (see the Request pages 6-8, 20-22) and a different claim interpretation (see the Request pages 18-20). During the prosecution of the application, Examiner has relied on Fodor pages 35 and 76, and the current SNQ is based on the disclosure at page 77 of Fodor et al.

The above listed documents 2-5 were neither cited nor used in rejections during the prosecution of the application that resulted in the present `716 patent.

Discussion of the Cited Documents and an SNQ

1. WO 92/10588 (Fodor et al) raises a substantial new question of patentability of claims of the present US Patent 5,795,716 (Chee et al) (see the request filed 11/27/07, pages 3-45, pages 65-88).

Fodor teaches methods and apparatus for sequencing, fingerprinting and mapping biological polymers, particularly nucleic acids. Fodor teaches methods for automated sequencing techniques and software useful in the methods (see Fodor pages 76-79). Fodor teaches with the automated detection apparatus, the correlation of specific positional labeling is converted to the presence on the target of sequence for which the reagents have specificity of interaction. Thus,

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the positional information is directly converted to a database indicating what sequence interactions occurred (see Fodor page 76).

Fodor further teaches, as the sequence of target is determined at a particular location, the overlap for the sequence would necessarily have a known sequence. Thus, the system can compare the possibilities for the next adjacent position and look at these in comparison with each other (see Fodor page 77). Fodor teaches a listing of those sequences which interact, data analysis may be performed on a series of sequences (see Fodor page 77). The data analysis is performed by computer using an appropriate program. The sequencing program in Figure 4 provides for automated scanning of the substrate to determine the positions of probe and target interaction (see Fodor pages 78-79). Fodor discloses the Hardware and software useful in the method (see Fodor page 79).

There is a substantial likelihood that a reasonable examiner would consider the teachings of WO 92/10588 (Fodor et al) important in deciding the patentability of claims 1-10 of the present US Patent 5,795,716.

2. PH.D. Thesis of J K Elder, 1993 (Elder Thesis) raises a substantial new question of patentability of claims of the present US Patent 5,795,716 (Chee et al) (see the request filed 11/27/07, pages 45, 49-58, 75 and 84). Elder Thesis was neither cited nor used in the rejections during the prosecution of the application that resulted in the present `716 patent.

Elder Thesis teaches image processing in nucleic acid sequence analysis. Elder teaches that the data analysis is performed by computers using software written in C++ and complied using the GNU C++ compiler. Images of oligonucleotide arrays were analyzed interactively

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using xvseq, and image analysis program. Computational analysis is performed using a variety of programs developed for the purpose (see Elder Thesis, page 132).

There is a substantial likelihood that a reasonable examiner would consider the teachings of Elder Thesis important in deciding the patentability of claims 1-10 of the present US Patent 5,795,716.

3. Southern et al (Genomics, Vol. 13, pages 1008-1017. 1992) (Southern) raises a substantial new question of patentability of claims of the present US Patent 5,795,716 (Chee et al) (see the request filed 11/27/07, pages 70-88). Southern was neither cited nor used in a rejection of the claims of the application that resulted in the present '716 patent.

Southern teaches an efficient method for making complete sets of oligonucleotides of defined length, covalently attached to the surface of a glass plate, by synthesizing them *in situ*. Southern teaches that it is possible to automate all steps of the method (See Southern page 1008). Southern discloses that when analyzing mutations, a known (non-mutated) sequence can be compared to the unknown sequence by subtracting the probe intensities of one from the probe intensities of the other. The known sequence is being used as a reference sequence (see Southern page 1014).

There is a substantial likelihood that a reasonable examiner would consider the teachings of Southern important in deciding the patentability of claims 1-10 of the present US Patent 5,795,716.

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4. US Patent 5,972,619 to Drmanac et al (Drmanac Patent) raises a substantial new question of patentability of claims of the present US Patent 5,795,716 (Chee et al) (see the request filed 11/27/07, pages 58-63). Drmanac Patent was cited but not used in a rejection of the claims in the application that resulted in the present `716 patent.

Drmanac Patent teaches computer aided analysis system for sequencing by hybridization (SBH). Drmanac teaches methods for sequencing a target nucleic acid by hybridization overlapping short oligonucleotide probes of known predicted sequence to the nucleic acid target serially or simultaneously (see Drmanac column 4). Drmanac discloses a computer program that is able to form subfragments from the content of N-mers for any given sequence (see Drmanac columns 21-31). Drmanac patent in example 7 (see columns 19-20) discloses that a known sequence was used to predict a series of continuous overlapping component octomer and nonamer oligonucleotides.

There is a substantial likelihood that a reasonable examiner would consider the teachings of Drmanac patent important in deciding the patentability of claims 1-10 of the present US Patent 5,795,716.

5. Drmanac Abstract Book raises a substantial new question of patentability of claims of the present US Patent 5,795,716 (Chee et al) (see the request filed 11/27/07, pages 76, 85). Drmanac Abstract Book was neither cited nor used in a rejection of the claims in the application that resulted in the present `716 patent.

Drmanac Abstract Book teaches a novel method for genome sequencing, miniaturization of sequencing by hybridization (SBHD) (see page 37).

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There is a substantial likelihood that a reasonable examiner would consider the teachings of Drmanac Abstract Book important in deciding the patentability of claims 1-10 of the present US Patent 5,795,716.

Conclusion

In view of the above, the request for reexamination is GRANTED.

Claims 1-10 of United States Patent Number 5,795,716 will be reexamined.

Extensions of Time

Extensions of time under 37 CFR 1.136 (a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to an applicant and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that ex parte reexamination proceedings "will be concluded with special dispatch" (37 CFR 1.555(a)). Extensions of time in ex parte reexamination proceedings are provided for in 37 CFR 1.550(c).

Patent Owner Amendment

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

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Page 12

90/008,886 Art Unit: 3991

The patent owner's correspondence address for all communications in an ex parte reexamination or an inter partes reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination, 72 FR 18892 (April 16, 2007) (Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

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Reexamination Facsimile Transmission No.	(571)	273-9900

Future Correspondences

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-9900.

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By FAX to:

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